

ABSTRACT OF THE DISCLOSURE

A polishing apparatus has a polishing table having a polishing surface, a top ring for holding a workpiece to be polished and pressing the workpiece against the polishing surface on the polishing table, and a film thickness measuring device embedded in the polishing table. The film thickness measuring device includes a light source for applying light having a predetermined wavelength to a surface of the workpiece, a spectroscope for separating light reflected from the surface of the workpiece, and a charge coupled device array for capturing light separated by the spectroscope. The polishing apparatus also has a controller operable to analyze information captured by the charge coupled device array over the entire surface of the workpiece to obtain a film thickness at a desired point on the surface of the workpiece.